

## Exhibit B-1



Solutions for a nanoscale world.

# VEECO INSTRUMENTS INC.

**SMITH BARNEY CITIGROUP  
2004 TECHNOLOGY CONFERENCE**

**SEPTEMBER 8, 2004**

**Ed Braun  
Chairman & CEO**



# VEECO PROVIDES ENABLING NANOSCALE PROCESS EQUIPMENT AND METROLOGY SOLUTIONS TO MULTIPLE GROWTH MARKETS

**Data Storage**

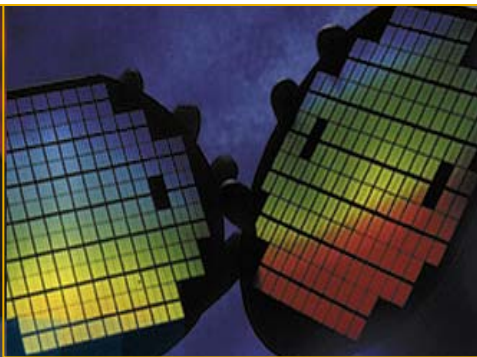
**Semiconductor**

**Compound Semi/Wireless**

**Scientific Research**



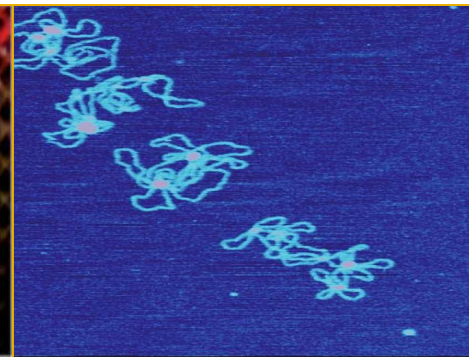
**80 and 160 GB; microdrives**



**90 and 65 nm; 300mm**



**HB-LEDs, WiFi,  
camera cell phones**

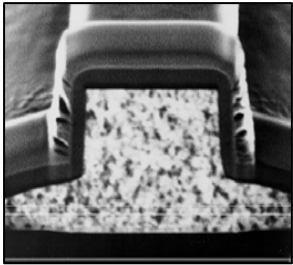


**Nanotech & Life Science**

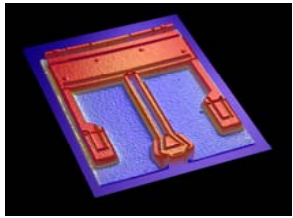
# VEECO LEVERAGES CORE TECHNOLOGIES IN GROWTH MARKETS

## WHAT WE DO...

### PROCESS EQUIPMENT (ADD AND REMOVE MATERIAL)

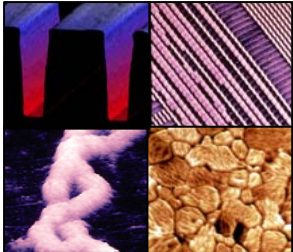


ION BEAM DEPOSITION  
EPITAXIAL DEPOSITION



ION BEAM ETCH

### METROLOGY (IMAGE, MEASURE MANIPULATE)

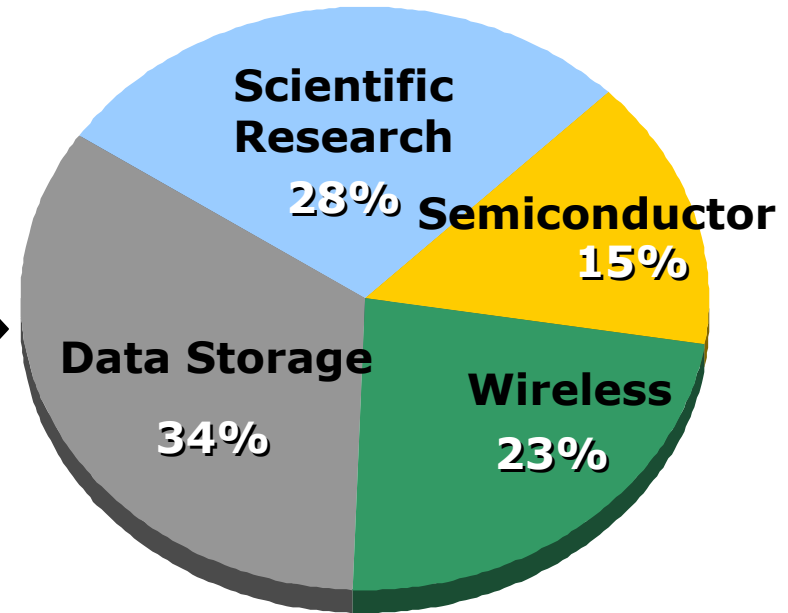


ATOMIC FORCE MICROSCOPY  
OPTICAL INTERFEROMETRY



## MARKETS WE SERVE...

1H '04 REVENUE (\$197.4M; UP 42%)



*Multiple markets provide stable growth offsetting individual market volatility...Broader opportunities than silicon semiconductor*

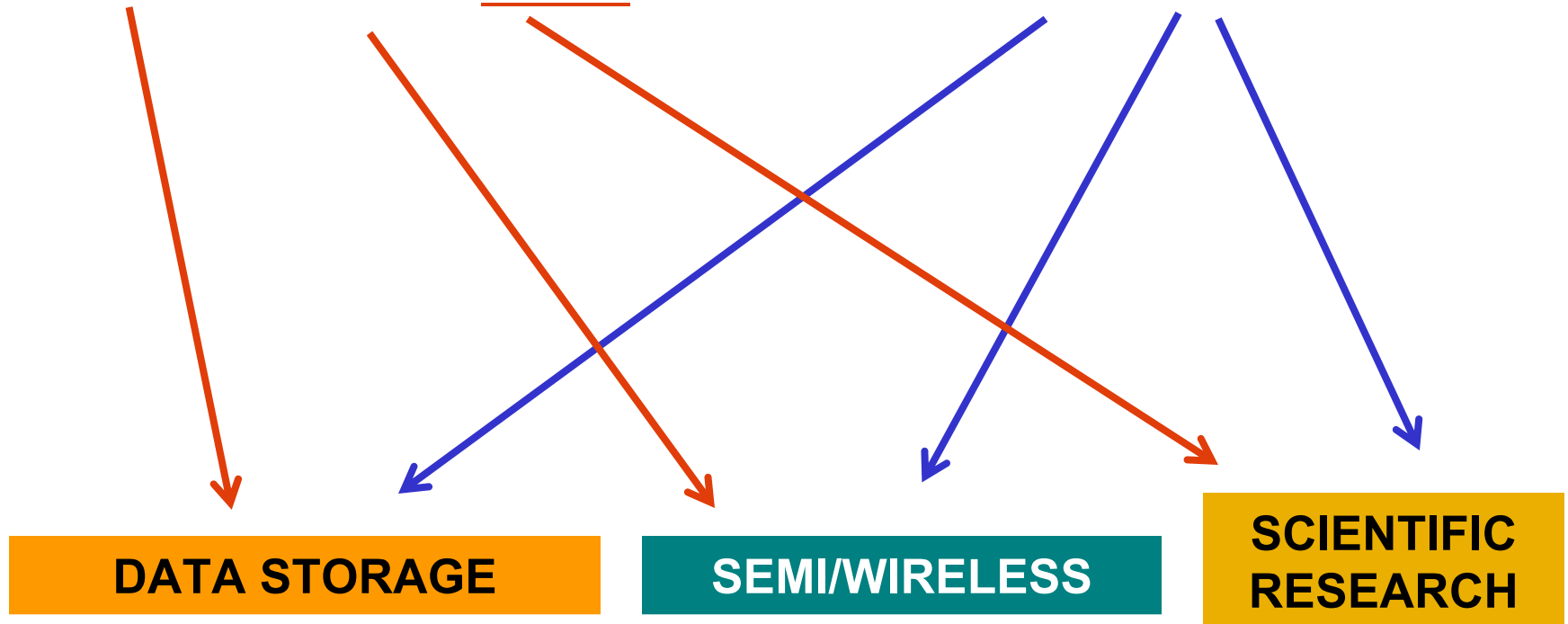
# LEADERSHIP TECHNOLOGIES SERVING MULTIPLE MARKETS

## PROCESS EQUIPMENT

## METROLOGY

IBE PVD IBD MBE MOVCD PRECISION LAPPING

ATOMIC FORCE MICROSCOPY, OPTICAL PROFILOMETERS



**USE PRODUCT LEADERSHIP TO CREATE CRITICAL MASS  
IN KEY MARKETS, AT KEY ACCOUNTS**

# SERVING INDUSTRY LEADERS

## MARKETS

*Data Storage*

*Wireless &  
Compound Semi*

*Semiconductor*

*Scientific Research*

## PRODUCTS

*#1 Equipment Supplier for  
TFMHs;  
  
Etch, Deposition, Lapping  
and Metrology*

*Only Broad line Equipment and  
Metrology Supplier  
  
MBE, MOCVD (Epitaxial Deposition)  
and Metrology*

*#1 3D AFM Metrology  
  
Automated Atomic Force  
Microscopy and Optical  
Profilers*

*#1 AFMs, SPMs and Optical  
Profilers  
  
Breadth of research  
solutions*

## CUSTOMERS



# VEECO 2004 INVESTMENT THEMES

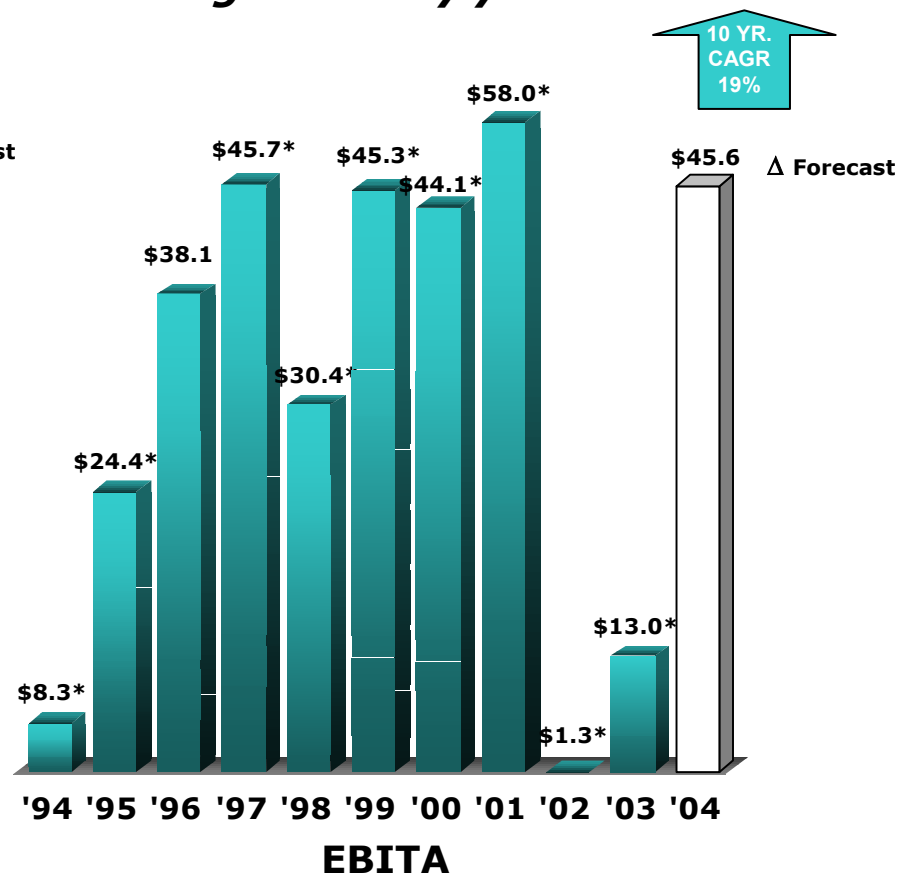
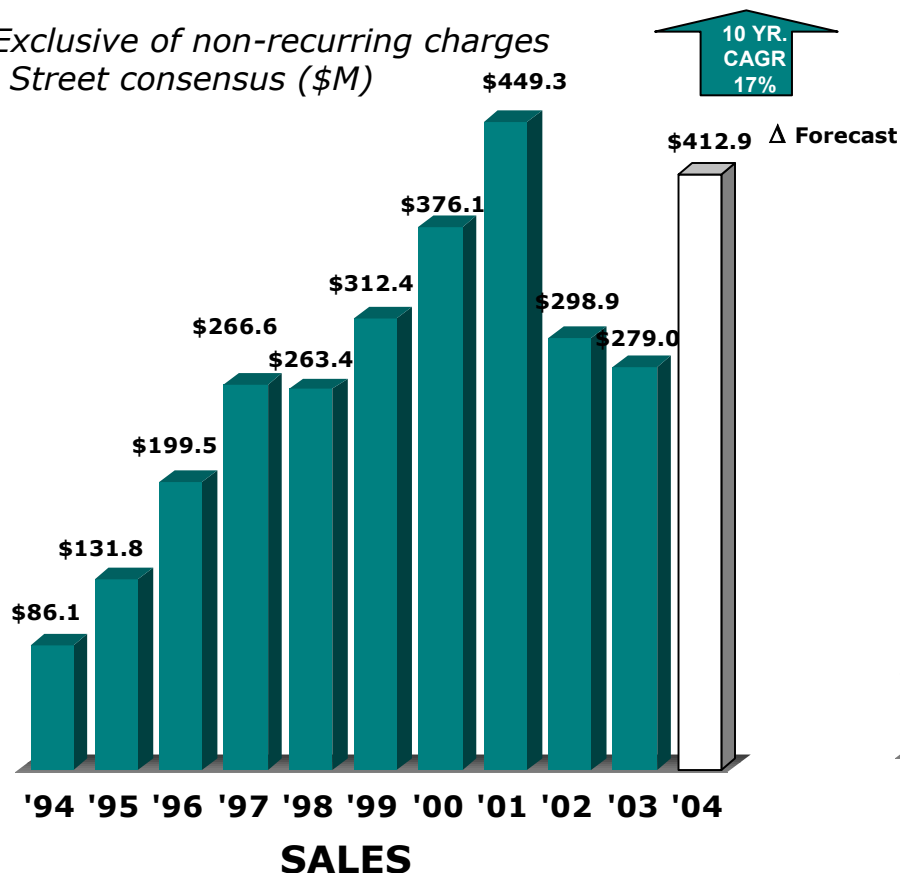
- We are a leading supplier of enabling technology for converging data storage, semiconductor/compound semi and HB LED, color display growth opportunities
- In the post PC era...microdrives, HB LEDs, color displays, and wireless technology will enable a wave of new high volume, digital consumer electronics for mass markets
- A diverse market and product mix allows Veeco a broader customer and product technology base than most other semi equipment companies
- Nanotechnology, smaller form factors, higher density and new materials will drive extensions of:
  - Moore's Law            20nm feature size
  - Areal Density            1 Tb/in<sup>2</sup>
  - Large high resolution, high brightness color displays

# VEECO'S HISTORICAL FINANCIALS AND OUTLOOK

## 2004 Forecast ...a revenue and earnings recovery year

\*Exclusive of non-recurring charges

Δ Street consensus (\$M)



- Our Company was founded in 1990 with sales of \$30 million and went public in 1994
- 10 year revenue growth from \$86M to \$413M...+17% CG per year ('94-'04)



# VEECO MULTI-MARKET GROWTH OPPORTUNITY

## Data Storage

Continued 80 GB production ramp, development of next generation 120/ 160 GB drives and advanced development of (perpendicular heads) for 2005/2006. Microdrives to enable new wireless consumer products (Ipod, TiVo, camera/cell phones)

## Semiconductor

Complete 90nm, 300 mm ramp, development of 65nm, 45nm

## Wireless

Explosive growth of Blue LED's for backlighting of color displays, handheld camera/ cell phone, large color screens, PDA, Wi Max, automotive, solid state lighting and RF devices

## Scientific Research

Continued strength of research AFMs/SPMs  
Nanoscience emerges (life sciences, material sciences genomics)

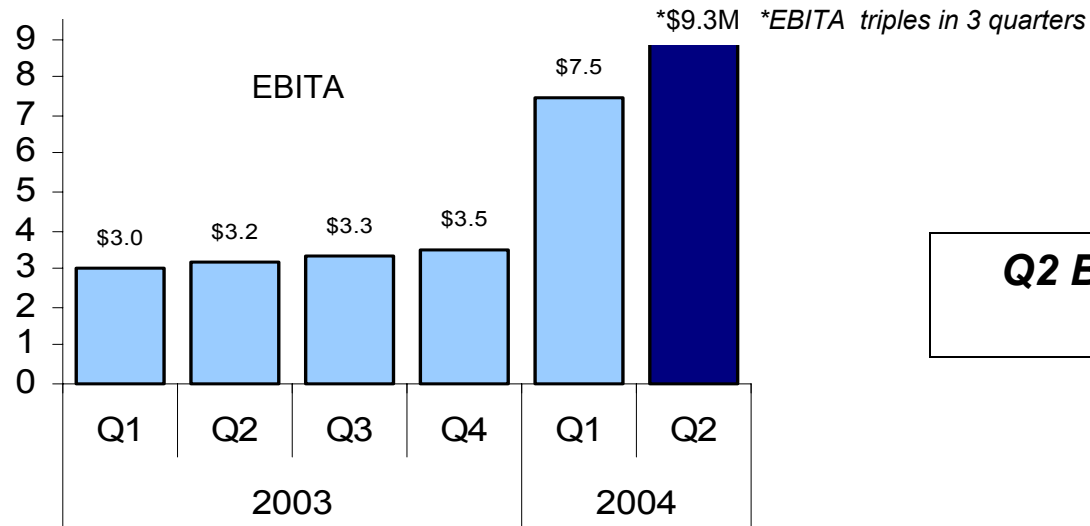
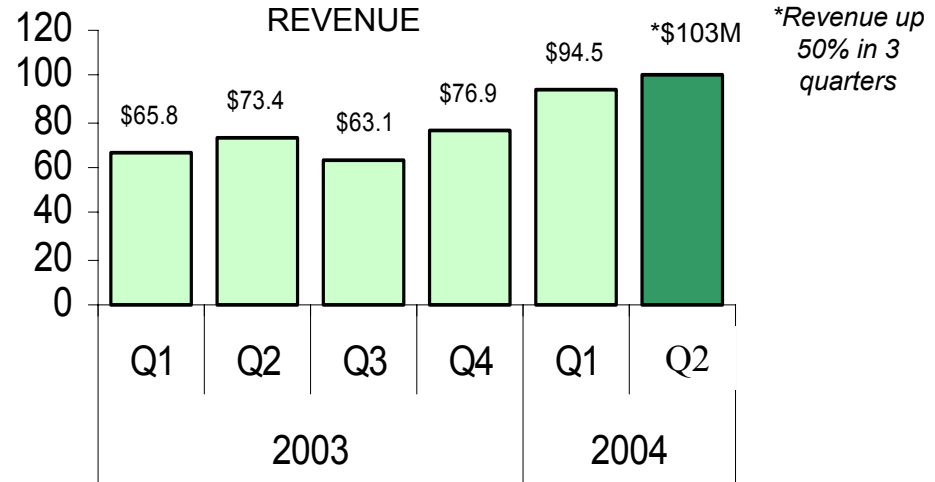
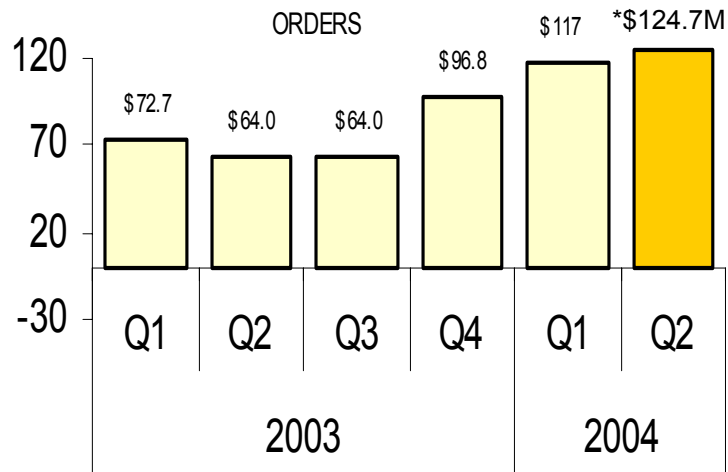
***The content of Veeco's enabling technologies increases in new consumer applications***

# VEECO: EQUIPMENT FOR HIGH GROWTH DIGITAL, WIRELESS CONSUMER PRODUCTS



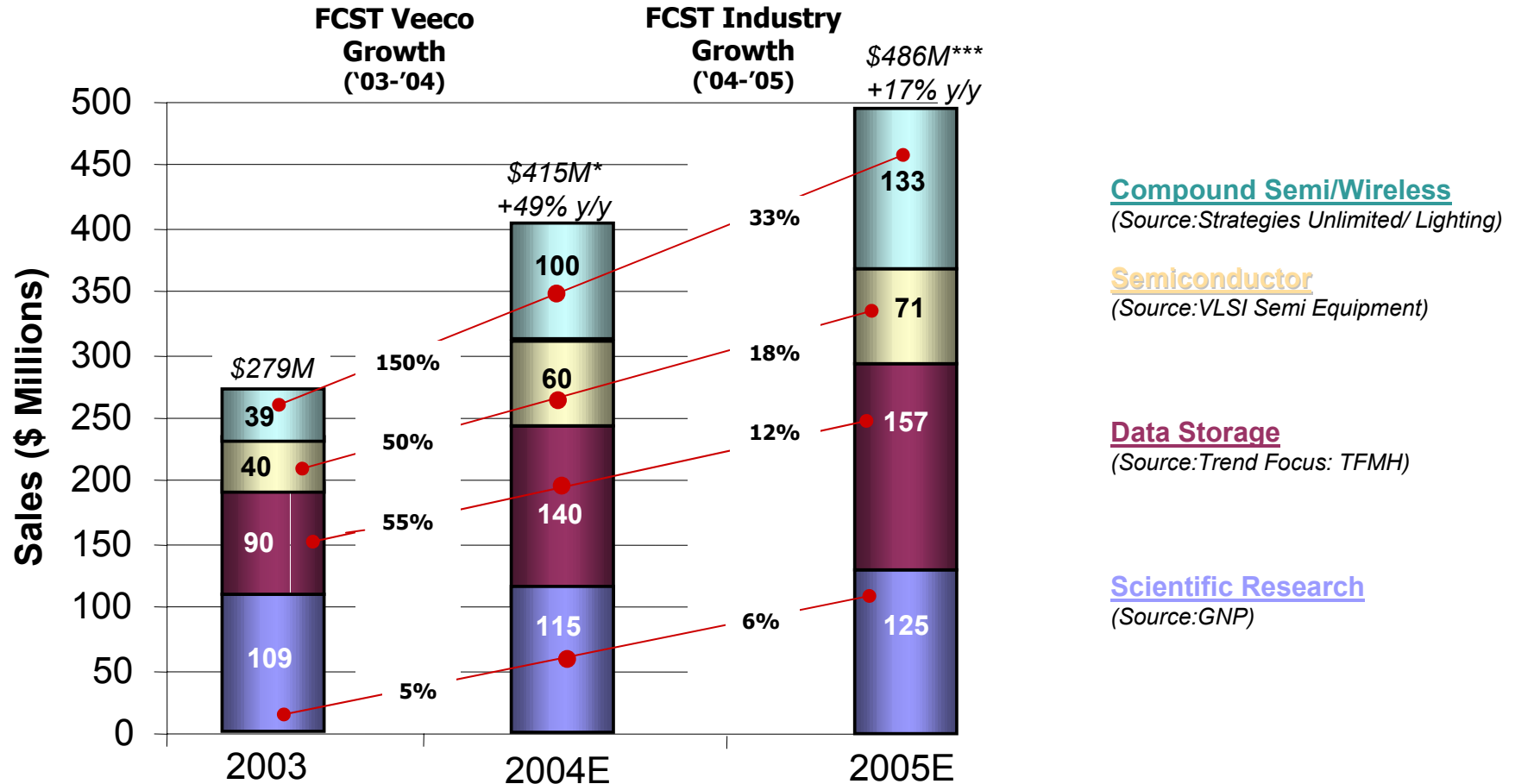
# VEECO IN A BROAD MULTI MARKET RECOVERY

*\*Orders doubled in 3 quarters*



**Q2 Backlog increased to \$164M**

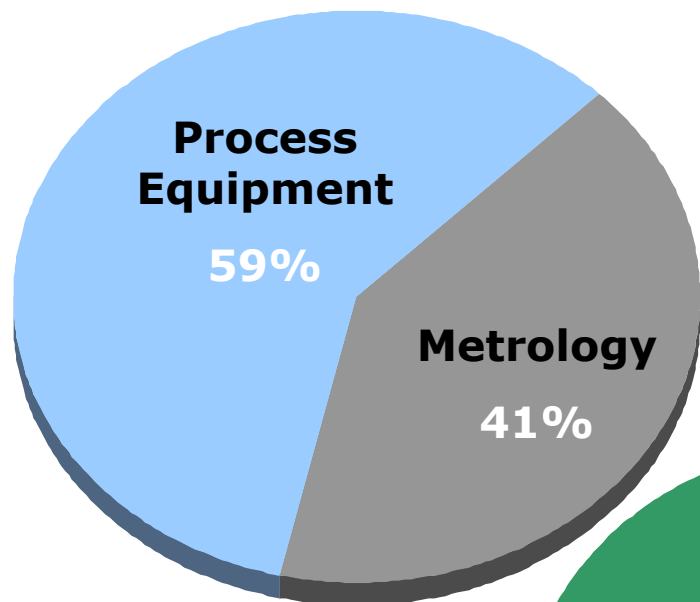
# VEECO GROWTH OPPORTUNITY BY MARKET



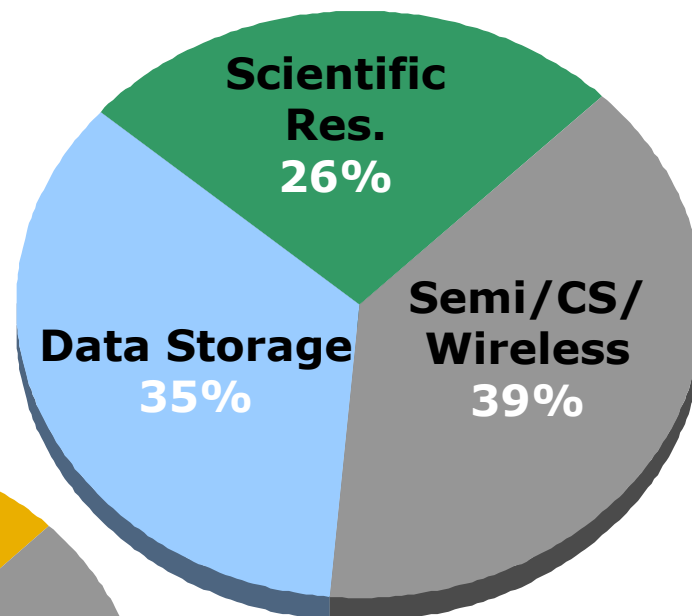
\* 2004 Analysts' Consensus

\*\*\* Veeco 2005 Assuming Growth Per Industry Forecast

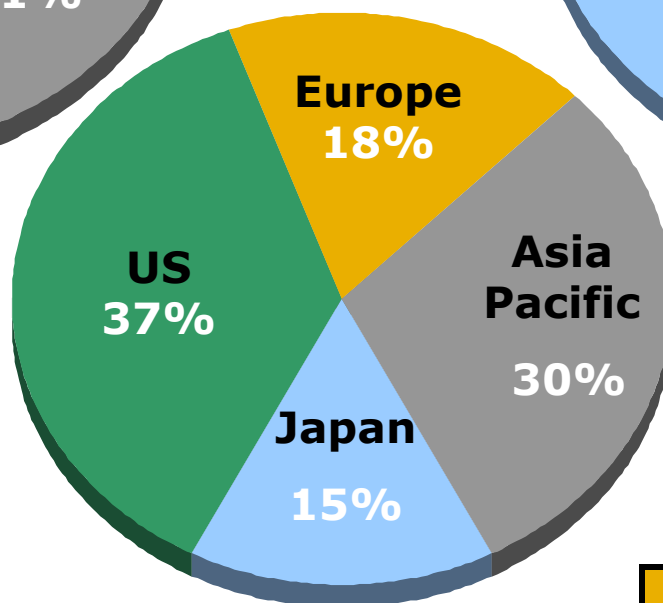
# DIVERSITY OF MULTIPLE MARKETS, PRODUCTS AND GEOGRAPHIC PENETRATION



**MULTIPLE PRODUCTS**



**MULTIPLE MARKETS**



**MULTIPLE REGIONS**

**Q2 2004 Sales \$102.9M,  
up 40%**



Solutions for a nanoscale world.



# MARKETS

# YOUR NEXT COMPUTER....

*Losing the wires is only the beginning*



*There are 1.5 billion mobile phones in the world today. They browse the Web, take pictures, send email, watch movies and play games. Soon they could make your PC obsolete.*



# WIRELESS CONSUMER PRODUCT GROWTH WILL DRIVE NEXT WAVE OF EQUIPMENT SPENDING



- Convergence of Semi/Data Storage/Wireless creates a new class of high volume, high growth consumer products with explosive unit growth from 2004-2007
- Wireless mobile consumer products (including cell phones) will approach 2 billion units by 2010... Compared to the installed base of 500 million PC's



# HOME OF THE (NEAR) FUTURE

*By 2010 each household will own 10 HDD's\**

## Mobile Applications



**New Microdrive  
(.85 dia.)**



**MP4 Video**



**Laptop**



**MP3 Music  
(i.e., iPod)**



**Mobile Phone**



**Automobile  
GPS Navigation**

## Home Applications



**Home Media Server**



**TiVo/DVR**



**Entertainment  
Centers/PCs**

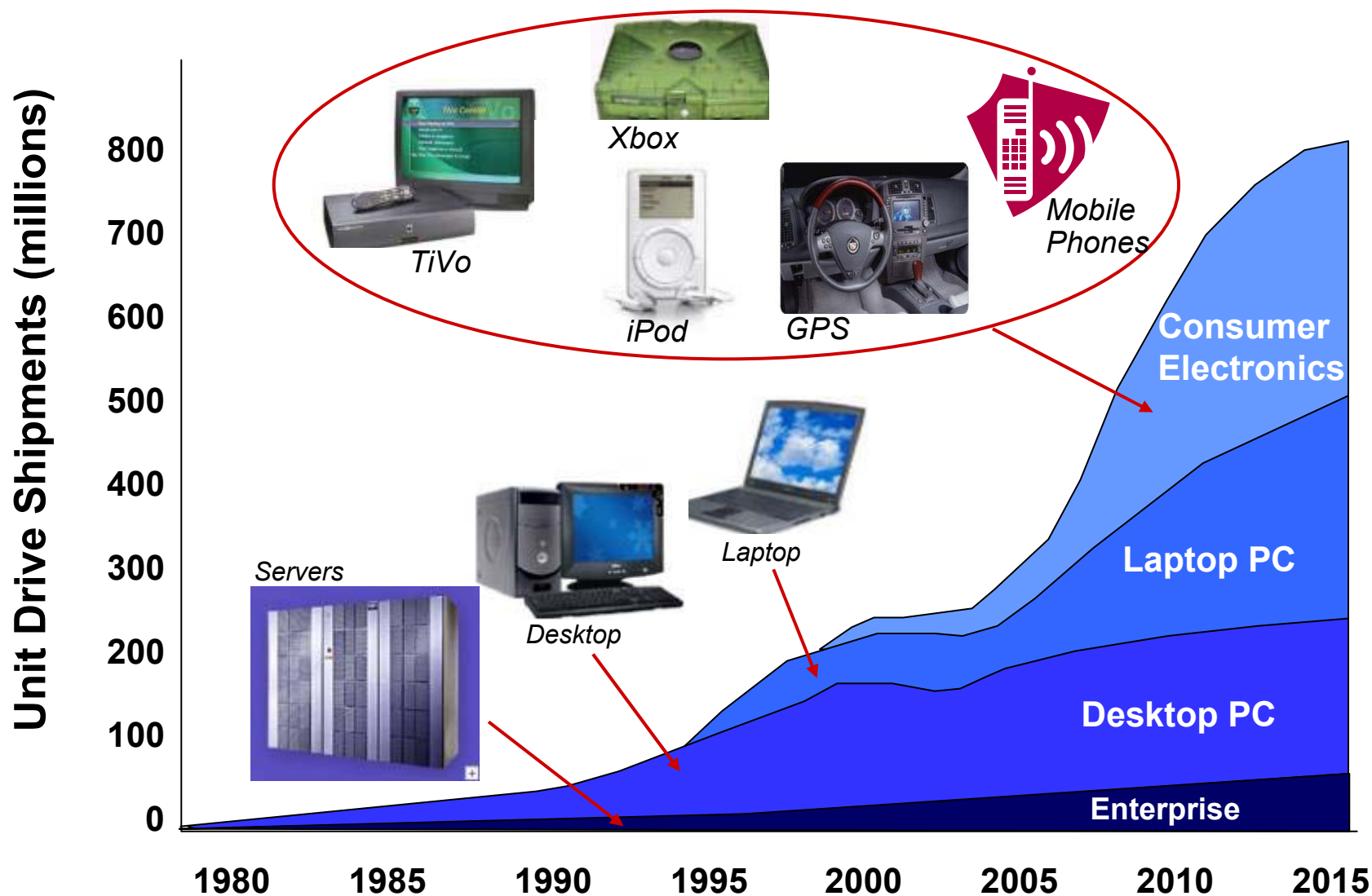


**Game (Xbox,  
PlayStation, etc)**

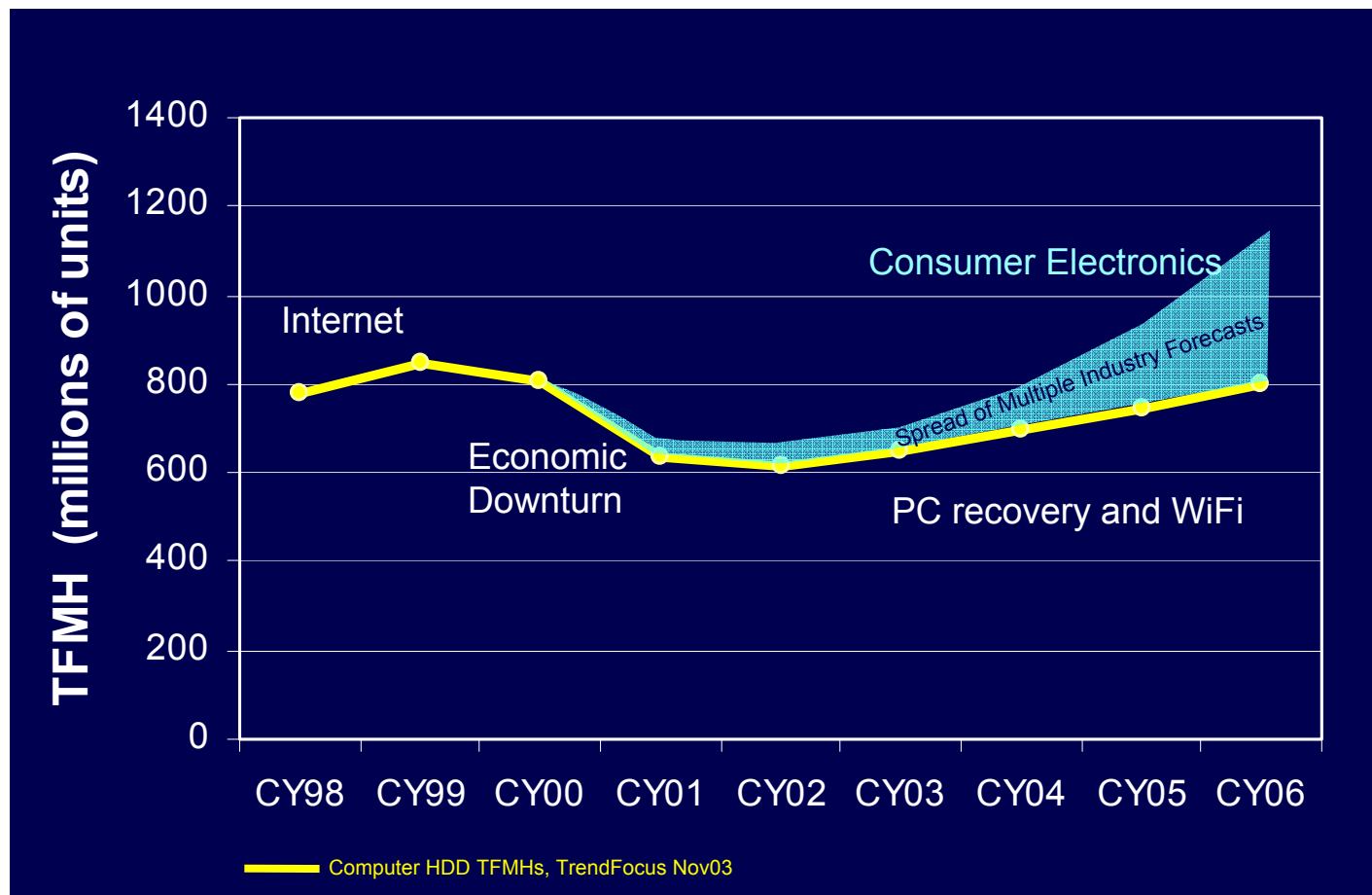
\* Source: Hitachi Global Storage Technologies

# HARD DISK DRIVE GROWTH STORY

*...opportunity for unit growth to double*



# TFMH FORECASTED GROWTH (REVENUE AND UNITS) TO REACH RECORD LEVELS



## CE Examples

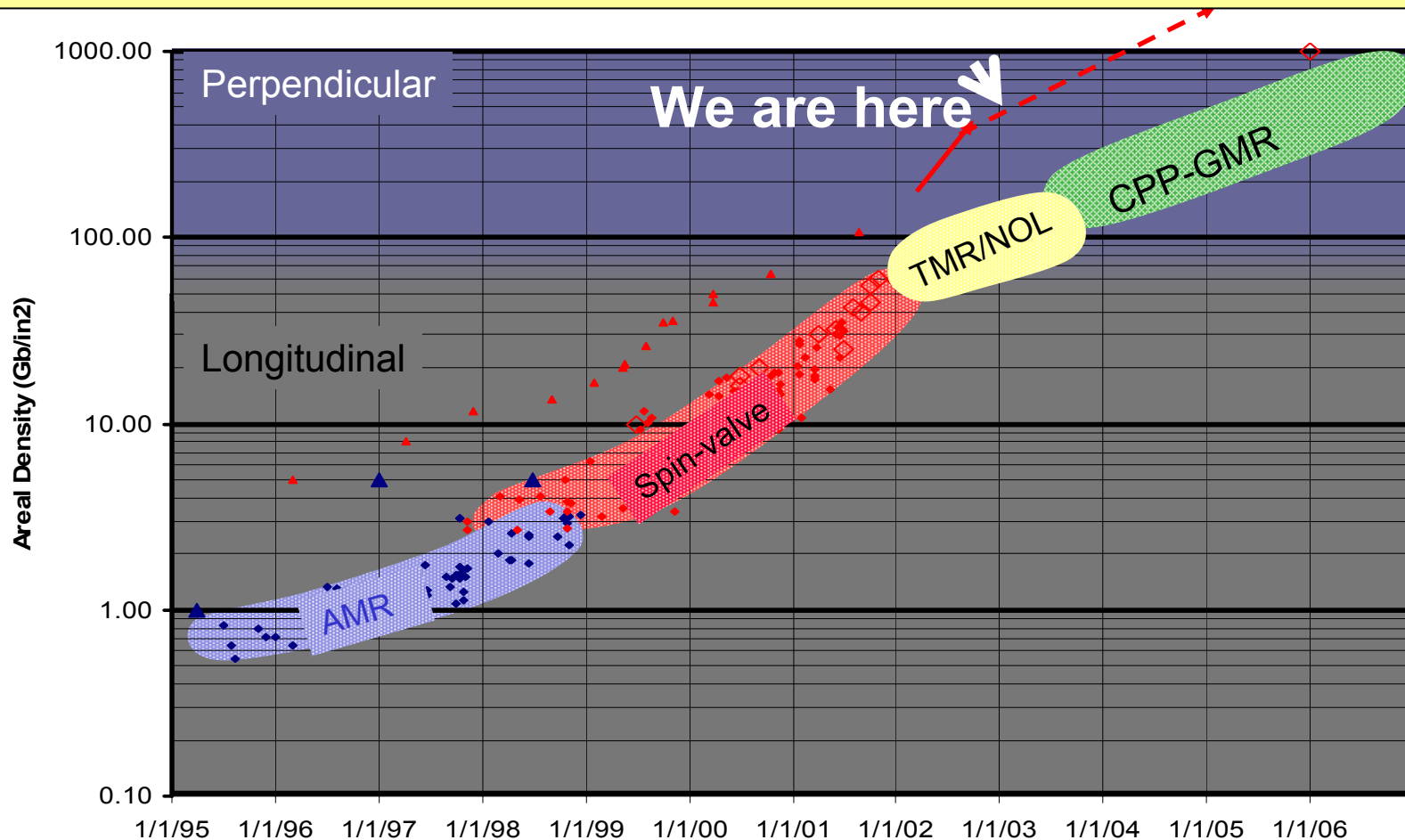
- MP3 (Microdrive)
- MP4 (Microdrive)
- Digital Photo (Microdrive)
- TiVo
- Automobile GPS
- Other

*"In 5-7 Years Consumer Electronic HDD could = PC shipments"*

*Bill Watkins, Seagate March 2004 Diskcon Singapore*

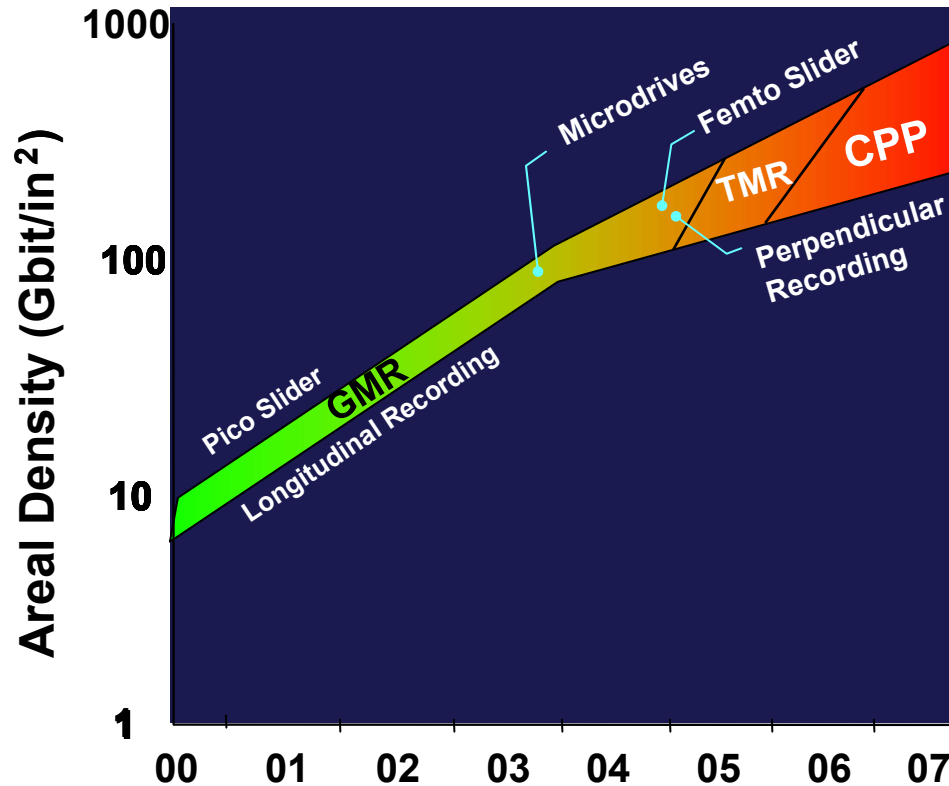
# VEECO'S DATA STORAGE OPPORTUNITY: SHRINKING DIMENSIONS REQUIRE "RE-TOOLING"

Areal density roadmap increases (50% per year) toward CPP (perpendicular recording) capable of 1 Terabit/in<sup>2</sup> (2006)... will require new manufacturing technology



# UNPRECEDENTED READER, WRITER, SLIDER AND FORM FACTOR CHANGES OCCURRING SIMULTANEOUSLY

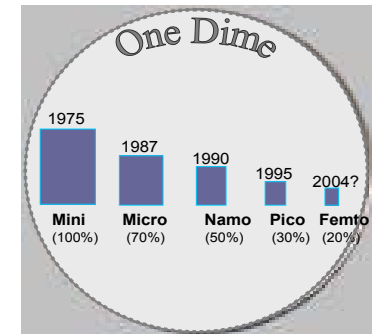
## *TFMH Technology Changes Drive Capital Equipment Growth*



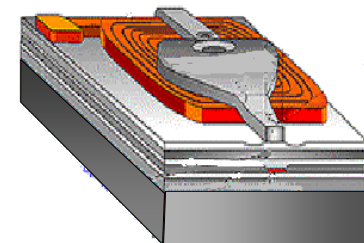
Microdrives



Slider Shrinks



Reader & Writer Development



# VEECO'S DATA STORAGE OPPORTUNITY: INDUSTRY'S BROADEST LINE OF ETCH, DEPOSITION AND METROLOGY

- Industry's broadest line of etch, deposition and metrology
- Industry's largest installed base (3,000 systems in the field)...Strong key account relationships
- Aii lapping, dicing and slicing ... total slider fab solution opportunity...first saw order
- Customers currently require upgrade and new technology...for 80 GB ramp, intro of 120GB and research for CPP... Veeco launches NEXUS etch and deposition solutions
- ***First half orders \$71.4M (up 45% vs '03)***  
***revenue \$67.0M (up 54% vs '03)***



# VEECO: IN EVERY STEP OF YOUR TFMH PROCESS



## Process Equipment



## Metrology

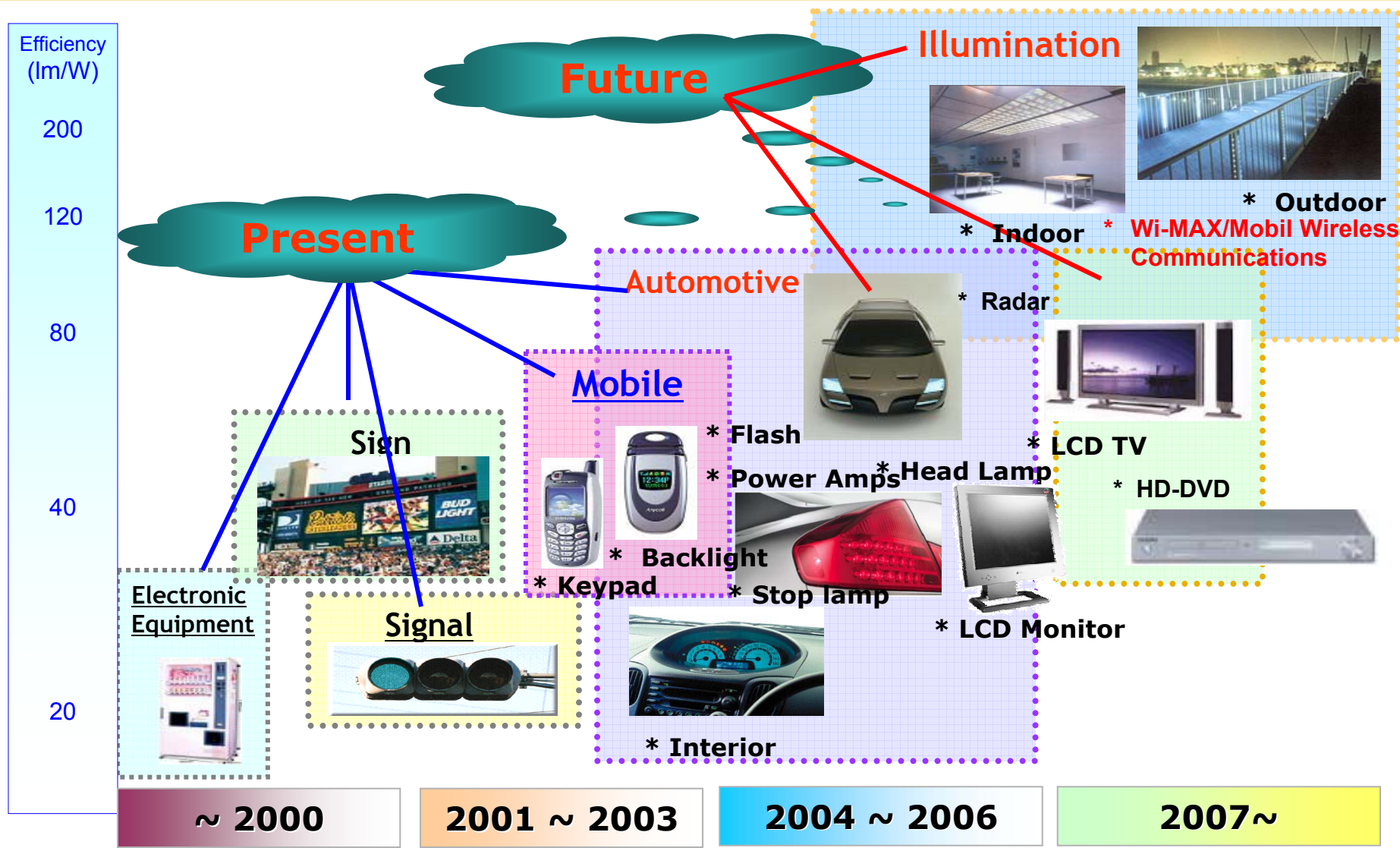


## WIRELESS/TELECOM...Q2 record Veeco orders \$51.1M

- Veeco is the leading supplier of thin-film process equipment and metrology solutions to the compound semiconductor industry
  - Unique ability to provide both MBE and MOCVD – two epitaxial technologies that determine functionality and performance of devices
  - Strategy to become a “one-stop shop” for equipment
- Growth in camera/ cell phone applications. Fully featured phones include >20 compound semi devices per phone. Cell phone sales expected to nearly double to 750M units by 2008
- LED backlighting growth opportunity to include larger color display applications (mobile PC's and flat panel TV displays)
- New automotive applications, headlights, fog lights and instrument panel displays
- Record Q2 orders \$51.1M, total of 26 MOCVD and 7 MBE systems, included 6 multiple system orders
- **First half orders \$90.2M up 346% vs '03**  
**revenue \$45.2M up 145% vs '03**



# HB LEDS...A MULTIPLE MARKET GROWTH OPPORTUNITY



Source: Samsung BLUE 2004

